



THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. June 9, 1886. No. 23.



There's Always a river to cross,
Always an effort to make,
If there's anything good to win,
Any rich prize to take.

The rougher the way that we take,
The stouter the heart and the nerve;
The stones in our path we break,
But ne'er from our impulse swerve;

For the glory we hope to win,
Our labors we count no loss;
Never pause and murmur because
Of the river we have to cross.

Tycard Sons, Pittsburg, Pa., have sent us their price list of Glass Honey Jars.

The Cincinnati Exposition opens on Sept. 1 and closes on Oct. 9, 1886. This is the thirteenth annual exhibition. Full particulars may be obtained of L. H. McCammon, the Secretary, at Cincinnati, Ohio.

A Queen-Introducing Cage, from Peter Brickley, Lawrenceburg, Ky., is on our desk, and as requested is placed in our Museum. It is similar to the one illustrated in "Alley's Bee-Keepers' Handy-Book," on page 204.

The Basilian Friars, of Northern Greece, for a breach of one of their rules, sentence the offender to a week's "Lenten fare," consisting of "milk, barley-bread and honey"—not a very disagreeable sentence we should imagine.

We have Received from the publisher, Mr. A. I. Root, Medina, Ohio, T. B. Terry's new book on "The Winter Care of Horses and Cattle," considered from a humane point of view, as well as from a dollars-and-cents view, and a consideration of the relation one bears to the other. Price 40 cents. It contains 50 large pages, and points out with certainty and in detail the most humane and profitable treatment for horses and cattle. It can be obtained of the publisher or at this office.

Bee-Suit in California.—On page 358 the statement is made that this suit has again been lost. Mr. Bohn has asked for a new trial, claiming that the jury were instructed erroneously by the court on the meaning of the words "willful" and "negligence." That our readers may see what these instructions were, we copy some of them as follows:

The word willfully, when applied to the intent with which an act is done or omitted, applies simply a purpose or willingness to commit the act or make the omission referred to. It does not require any intent to violate law or to injure another or to acquire any advantage.

The word negligence imports a want of such attention to the nature or probable consequences of the act or omission as a prudent man ordinarily bestows in acting in his own concerns.

It is negligence in the owner of bees to keep them in such a manner that they trespass upon and injure the property of another.

It is a well established rule of law that every person must so use and control his own property as not to injure the property of any other person.

If you find from the evidence that the defendant's bees did injure the plaintiff's grapes either while said grapes were on the vines or while they were drying on trays, then defendant is responsible to plaintiffs for such injury, and it is for you to determine from the evidence in the case the amount of money that will compensate plaintiffs for such injury.

Although a person can only have a qualified property in bees, the person having them in his possession is liable for any injury they may do to the property of another person; and they are in the possession and under the control of the owner of the hive as long as they continue to use the hive as their home. The owner of the hive does not cease to be the owner of or lose his control of the bees simply because they are off of the owner's premises gathering honey or pollen to store in the hive in accordance with the usual habits of the bees. It is only when the bees leave the hive, escape from the owner of the hive and their identity is lost, that the owner of the hive ceases to be their owner.

Trespass is any misfeasance or act of one man whereby another is injuriously treated and damaged either in his person or property, and the term any misfeasance signifies the doing of a wrongful act or the improper performance of a lawful act, and the Court instructs you that the bee-keeping and culture of bees in apiaries is a lawful occupation.

National Bee-Keepers' Union.—On page 357 will be noticed a portion of the First Annual Report of the Manager of the National Bee-Keepers' Union, which is now being sent to all the members, with a blank voting paper to be used in voting for officers for the ensuing year; together with a call for dues (25 cents) and one assessment (\$1) for the year commencing on July 1, 1886.

In order to explain and answer some inquiries we will add that the Union is a voluntary affair. To remain a member requires 25 cents a year annual dues, besides the assessments called for. If the assessments or dues are not paid within the specified time—membership ceases; all claims against former members are lost, and all claims to the protection of the Union are dissolved. It is not intended to have more than one assessment a year, unless some urgent case should make it necessary, and then there are but few who would not cheerfully respond to a call for an extra dollar.

The California Honey Crop for the present year gives promise of being large and of excellent quality. A trade circular from San Francisco remarks thus:

The promised abundance of honey this season, the liberal supply now in foreign markets, and the extreme cheapness of almost every article of consumption, especially of sugars, syrups and the like, which come into competition with honey, make it altogether improbable that anything approaching fancy values will be realized, although for superior qualities comparatively good figures may be obtained, provided we are favored with free foreign orders. The first new comb of the season, a sample lot of extra choice, brought 14 cents.

The California Grocer says that the crop of 1885 was about 1,250,000 pounds. The foreign export from San Francisco during the year was approximately 8,800 cases. The shipments East by rail were 360,000 pounds from San Francisco, and 910,000 pounds from Los Angeles, including both comb and extracted. We notice that another California paper estimates the crop of 1885 at 2,000,000 pounds, and the crop of the United States for 1885 was put down at 26,000,000 pounds. We do not think these figures are quite large enough, though it was an exceedingly poor crop.

Barrels for extracted honey is an important item. Much good honey is ruined by being put into old molasses and whiskey barrels. Some very foolish persons have used old kerosene barrels for extracted honey. One case of the latter came under our notice only a short time ago; and of necessity the honey was entirely spoiled. It is a mistake to use very large barrels; they are so troublesome to handle, and generally hold too much honey to be easily sold.

The best packages are soft-wood kegs made of "Norway pine." They are convenient to handle, and are well suited to cater to the popular demand for honey in small packages. When compared with large barrels holding from 300 to 500 pounds each, they are fully as cheap and often cheaper. They need no waxing, but should be thoroughly scalded with boiling water before used, but not "soaked." Considering the cost and trouble of waxing, the loss of honey by leakage, and the ease with which these kegs can be handled and shipped, with an actual saving in original cost, it is apparent that they are the best. Often a five or ten gallon keg of honey can be sold where a barrel might go begging for a customer.

Adulteration a Crime.—The Monetary Times of Toronto, contains this item: "Vermont has passed a law making the adulteration of maple sugar or honey with any substance whatever, punishable by a fine of from \$25 to \$50." Do any of our Vermont subscribers know of the passage of such a law? We hope that if such a law exists, that it will be rigidly enforced.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.



AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—Ed.]

Shading Hives—Division-Boards.

Query, No. 261.—1. What is the best way to make both artificial and natural shade for hives with thin walls? 2. How is the best kind of a division-board made?—E. B.

1. We shade our hives under trees and cover them with a rough board roof. 2. Our division-board is a $\frac{3}{4}$ -inch board with oil-cloth rounded over the ends to make a tight fit and loosen easily.—DADANT & SON.

1. Artificial shade is all that is used in my apiary. A shade-board made of any cheap lumber or shingles suits me best.—G. W. DEMAREE.

1. For artificial, use a thin board; for natural, use grape-vines. 2. I use an inch board the size of the inside of the hive below the rabbet, tacking on the top-bar of a frame for it to hang by. To make it fit tightly and still not swell tight in wet weather, tack strips from old rubber boot-legs to the sides and bottom.—G. M. DOOLITTLE.

1. I prefer a light board 2x3 feet held in place by a weight. I have used sun-flowers to good advantage. 2. It is made by the bees, and is a good worker comb. If it is not tight fitting, and you wish it to be so, tack strips of cloth to its edges.—W. Z. HUTCHINSON.

1. Grape-vines or trees, for natural shade, being sure of good circulation of air; that is, not having so dense a shade near the ground as to stop circulation. For artificial shade, boards projecting on the south side over the hive with an air-space under, or a bunch of tall grass or hay laid on top with a stick of fire-wood for ballast. Do you think that thin walls are as good as inch walls? 2. I have never seen a division-board that fully suited me. I am using a plain pine board $\frac{3}{4}$ -inch thick, but it is not possible to make a close enough fit without making it too hard to move.—C. C. MILLER.

1. Trees are the best natural shade. In using such the "bees won't go to Mahomet," so you must carry them to the trees. For artificial shade I have found nothing better than a flat board laid on top of the hives, and large enough for the purpose, "a la Heddon." A little ingenuity and a wide board or a piece of old sail-cloth or burlap will make all the shade required. 2. A piece of $\frac{3}{4}$ -inch deal, the size of the frame, with the top-

bar nailed on, makes as good a division-board as anything.—J. E. POND, JR.

1. The best shade is a wide shade-board raised by cross-pieces so as to rest about 4 or 6 inches above the hives. If we are afraid of wind, we can arrange to place bricks on the under side, which will weight the boards and yet not show. I use cross-boards 4 inches wide and connect these by a third board so nailed as to hold one or two bricks.—A. J. COOK.

What the best way is I do not know, but I can give you my way. My hives are among grape-vines on all sides. I also use a board larger than the top of the hive, letting it project on the south and west sides. 2. I use division-boards that just fit the inside of the hive, made of $\frac{3}{4}$ -inch lumber; also $\frac{1}{4}$ -inch lumber, but I see no difference. Nail it on a top-bar of a frame, and let it hang on the metal strip that holds the frames. In winter I use a division-board for small colonies 2 inches thick, packed with chaff.—H. D. CUTTING.

1. Where hives cannot be protected by the shade of trees or vines, a large shade-board is a good thing. 2. To make a serviceable division-board, cut a board 2 inches shorter than the hive is inside, and nail cleats on the ends.—G. L. TINKER.

1. ALL should be shaded, and when so, the thin-walled hives are coolest. Let natural shade go, and shade your hives with a board, or combination of boards measuring 2x3 feet. 2. We need no division-boards, I think.—JAMES HEDDON.

Pure Queens—Mating of Queens.

Query, No. 262.—1. Would an Italian queen reared from the egg, by a black colony of bees, be as pure as one reared by an Italian colony? 2. Is a queen reluctant to mate with a drone from the same hive that she herself is from?—J. M. C.

1. Yes.—H. D. CUTTING.

1. I think so. 2. This can only be guessed at.—G. M. DOOLITTLE.

1. I think so assuredly. 2. No one knows, but from analogy I should say no.—A. J. COOK.

1. Yes. 2. I do not think that a queen could tell from what hive a drone came; if she could, I doubt her having any objections to one from the same hive as herself.—W. Z. HUTCHINSON.

1. Yes, of course. 2. We think not.—DADANT & SON.

1. Yes. 2. Yes, exceedingly so. The queen's disposition to mate with a drone of a foreign scent is so great that I have found it very difficult to get them to unite with such drones though not at all related.—G. L. TINKER.

1. I think they would. I do not think that the nursing bees exercise any influence as to the purity of blood, by merely nursing the young queens. I have had large experience in this matter, and I am quite convinced that neither the worker nor royal progeny of one race of bees is

affected in the least by being nursed and fed by another race.—G. W. DEMAREE.

1. There is no reason either in theory, or practical facts, that would tend to show that she is not. I should consider her progeny pure if she was purely mated. 2. No one can tell. I do not think that any difference will be discovered, however.—J. E. POND, JR.

1. Just as surely as a child of yours tended by a black nurse-girl would grow up a white child. 2. At a guess I should say she would hardly recognize the difference, but it is quite possible she might.—C. C. MILLER.

Straining and Purifying Wax.

Query, No. 263.—What is the best and quickest way of straining and purifying wax? I am experimenting with some of my bees, to secure the greatest yield of wax and less of honey. Out of a hundred hives I get a good deal of wax, as I remove it freely; but I do not like the looks of it after it is strained. I am at a loss to know how to get rid of the sub-strata of impurities after it is strained and cooled.—Austin, Tex.

The sun wax-extractor promises to be the best for extracting wax. By its use there is no substrata of impurities to get rid of.—G. L. TINKER.

I have no trouble in obtaining nice wax with any of our modern tin wax-extractors.—H. D. CUTTING.

After all that has been said about improved wax-extractors, I have the best success with a large kettle and bags of thin burlap. To purify the wax frequent melting in plenty of hot water gives me the best results. Hot wax should never come in contact with cold water.—G. W. DEMAREE.

Melt it over a great deal of water, and do not boil too highly. Let it cool slowly, and strain over a sieve if you choose.—DADANT & SON.

To every 10 pounds of wax add 1 quart of water and 1 pint of good vinegar. When all is melted, strain and put it in a warm place so that it will cool slowly. When cold, scrape the dirt from the bottom where it will be found all together, leaving the wax clean and nice.—G. M. DOOLITTLE.

I know of no better way than to allow the wax to cool in deep tin-cans surrounded by sawdust, or some non-conductor of heat. As the wax cools very slowly the impurities settle to the bottom. The cans should be smaller at the bottom than at the top.—W. Z. HUTCHINSON.

Melt a large quantity together, having it deep rather than shallow; let it cool very slowly, and you will succeed in scraping off all impurities from the bottom.—C. C. MILLER.

Melt it in water, and continue the melting process till it becomes clear. When cold, after first melting, most of the sediment will be found at the bottom of the cake. Shave this sediment off, and melt it over again; shave off the sediment and so continue till all is clear. Two or three meltings at the most has been found sufficient with myself, even when exceedingly dirty combs are used.—J. E. POND, JR.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark \odot indicates that the apiarist is located near the center of the State named; δ north of the center; ϕ south; \oplus east; \ominus west; and this \nearrow northeast; \nwarrow northwest; \searrow southeast; and \swarrow southwest of the center of the State mentioned.

For the American Bee Journal.

Constructing Bee-Hives.

C. W. DAYTON.

There are many different arrangements for joining the covers and upper apartments to the brood-chamber, of which the mitre, rabbit and telescope joints comprise the greater number. There seems to be an idea with some that a hive-cover cannot be perfect without some sort of a rim attached, whether the rim is 2 inches wide to serve the purpose, or 8 inches wide to cover a case of sections. These joints are calculated to keep out cold and water. There is nothing better than a quilt spread over the hive held in place by a straight board carrying a small sized stone. That arrangement forms the closest fitting of all the joints, I believe.

As surplus stories are adjusted after the cold of the spring, and before it begins in the fall, a cold-excluding joint is as useless for its intention, as it is restrictive of needful circulation in mid-summer. There is nothing to go in at the joint but a driven rain, and that would not get on the combs, but would run down on the inside of the hive; and bees that are loitering their time away on the side of the hive ought to get wet.

Though water would not be very objectionable, I believe that it is usually the case that driven rain could not enter a joint between two parts of a hive, because of the wax and propolis deposited there; as I have known on several occasions four-story hives being tipped over, and remained unseparated and were righted by lifting by the topmost part.

Since using these arrangements side by side for the purpose of testing them, I greatly favor putting one hive on another as though they were ordinary boxes. In the construction of hives of this kind it requires not much more than one-half of the labor and three-fourths of the expense of the other kind of hives, and this in producing honey at 5 cents per pound, as we may have to do in a few years, will be quite a saving. Since beginning apiculture, and not being satisfied to follow exactly in the footprints of others, it has been a continued

change from one arrangement to another, so that years of study and experiment have led me to adopt the above cheap, practical and efficient arrangement.

While a plain cleated board does well for a cover, the one I like best is a $\frac{3}{8}$ -inch cleated board, $\frac{1}{4}$ inch each way larger than the hive, containing in its upper side, to prevent warping, saw cuts 4 inches apart, running with the grain and $\frac{1}{2}$ -inch in depth. Then it is covered with tin extending down on the sides $\frac{1}{2}$ of an inch below the edge of the board. The tin should be cut and soldered at the corners, so as to fit closely, a tin handle soldered to the centre of the top, and a coat of paint makes it complete. In this I find a cover that is cheap in the end, is not disturbed by wind, never leaks, and in connection with a quilt laid over the brood-nest, makes a very heat-confining joint.

Bradford, δ Iowa.

Country Gentleman.

The Ventilation of Hives.

L. C. ROOT.

In my own locality (Central New York) the period is so short during which we must secure our surplus honey, that we must manage our bees on the non-swarming plan; and every bee-keeper is aware that to control swarming, care must be exercised in shading and ventilating the hives. In any section where it is found difficult to prevent swarming, a properly arranged ventilator in the bottom of the hive is very essential. In fact, I might say that I consider a ventilator desirable in any hive, whatever the location. I find that where hives are placed on pieces of 4x4 scantling, they are so near the ground that the air which enters the hive under the bottom-board is sensibly cooled, and thus aids in lowering the temperature within.

For many reasons I would have the ventilation ample. To meet all requirements, an opening 10x12 inches in the bottom-board would be found none too large. At each side of this opening nail a cleat with one corner rabbeted out, to receive a slide by which the ventilation can be regulated.

In some of my hives, in which I do not winter bees, I nail a piece of wire-cloth on the upper side of the opening, to prevent the bees from coming out when the slide is drawn; but for various reasons, I prefer to have the wire-cloth on an extra slide, and nail the wire-cloth on the under side of it. In this way, you will be able to close the opening entirely, when necessary; or to admit the air and confine the bees, as required in moving bees; the wire-screen may be slid in place, or both may be left out, if desired. In constructing this ventilator, all work should be thoroughly done, so that when closed it will be perfectly tight, and at the same time, the slides work well.

According to my experience, bees seem to winter better when there is

an opening directly under the cluster. They seem more certain of their freedom, and as the dead bees fall, they will drop out of the hive. When only the entrance is left open, it often becomes clogged. To secure the conditions which I suggest, some bee-keepers remove the hives from the bottom-boards, and set them directly upon pieces of scantling. I prefer the ventilator, as it saves labor, and is more agreeable when carrying the hives to and from their winter quarters.

I am not advising this ventilator for such as will not avail themselves of its benefits in the management of their bees. There are those who think that when they purchase a movable-comb hive, Italian bees, a smoker, and other fixtures, they have insured success, and have no part to perform in the matter themselves. A box-hive with a piece of bark for a roof, is all that will be of value to such, until they learn that these appliances are only valuable, as far as they can take advantage of them, in a more intelligent management of their bees.

During an extended practical experience, I have tested the worth of a good system of ventilation, and have proved it to be indispensable. If on some warm day during the best honey-flow, any observing bee-keeper will test this matter by opening the ventilator in one hive, and leaving it closed in the one next to it, he will soon be convinced of its necessity. If during such honey-flow, bees are seen idly clustering upon the front of the hive, it is conclusive evidence that they either lack room for storing their honey, or the hive is not properly ventilated. For warmer climates, it seems to me that ample ventilation must be an absolute necessity.

Mohawk, δ N. Y.

The National Bee-Keepers' Union.

The following is a selection from the report of the General Manager for the past year:

The past year has been an eventful one for the "National Bee-Keepers' Union," which was organized one year ago, and charged with the duty of "protecting the interests of bee-keepers," by "defending their rights" under the laws of the different States where they reside.

Besides giving the moral encouragement to the pursuit of bee-keeping which such a National organization naturally bestows, it has materially assisted in several cases where the law was invoked to crush the interests of our industry.

In June of last year Mr. Freeborn, an extensive apiarist of Wisconsin, was sued by a neighbor who kept a flock of sheep, and imagined that the sheep were deprived of their pasturage by Mr. Freeborn's bees, and otherwise annoyed by them.

It was understood that this was to be a "test case," and if the plaintiff succeeded in obtaining a verdict in

his favor, either by the ignorance or prejudice of a jury, other bee-keepers would be likely to be sued to recover damages done to pastures, vineyards, and gardens by bees; and any one owning a few square rods of land, devoted to almost any purpose, may try to recover damages from all the owners of bees in the vicinity.

As soon as this Union was formed, I made the necessary preparations to defend this sheep-bees case. Among other things I wrote to Messrs. Demaree and Pond, as both were lawyers as well as bee-keepers, to know upon what terms they would undertake the defense of the case. Mr. Demaree responded that it would be difficult for him to leave his home at the time mentioned, but if it was deemed essential, he would do so; but suggested that the case might be studied by Mr. Pond and others, and "points of law" might be written out for use by the local attorneys, and it would be less expensive and do just as well as to take the more expensive method.

Mr. Pond replied that if it was deemed necessary he would go to Wisconsin and conduct the case, but that he did not think the Union could afford to employ him, and pay the necessary traveling expenses. He said that he could not afford to do it for less than "day-pay" for the time occupied in coming and going, etc.

After consulting with the Executive Committee, I concluded to employ local attorneys, and have Messrs. Demaree and Pond review the case, examine the authorities, and write out "points of law" for use at the trial.

This arrangement was made, and the "briefs" were prepared and sent to me; several other lawyers also prepared "briefs" and presented them to the Union. These were all sent to the local attorneys for use at the trial.

I paid \$50 each to the two local attorneys, \$25 to Mr. Pond, and \$6 for court fees. Mr. Demaree generously donated his "brief" to the "Union Defense Fund."

The Judge made a thorough examination of the laws of the State, and concluded that their existed no laws or rulings upon which he could instruct the jury; and thus ended that case.

The Union made such a stir in the matter, showing such fighting enthusiasm among bee-keepers, that there would have been a *lively time* had there been a trial on, the merits of the case.

In California, a suit has been tried in a Justice's Court against Mr. Bohn, for alleged damage done to grapes by his bees. This suit was lost in the lower court, because witnesses were obtained who testified that they had seen the perforation and destruction of the grapes done by Mr. Bohn's bees. In vain did the defendant's attorneys prove by a score of witnesses that the bee's tongue could only be used to extract sweets from the flowers—not to bore after them. The evidence of the eye-witnesses of the plaintiff had weight with the jury, and they accordingly returned a verdict against the defendant for \$75

and costs of suit, which amount to over \$60. The damages claimed were \$299.

The National Bee-Keepers' Union advised Mr. Bohn to appeal from the decision of the Justice's Court, and assured him that the Union would stand by him, and aid in the appeal by sending money, obtaining legal advice, depositions from scientific experts as to the incapability of bees to puncture grapes, etc. The appeal was taken and again lost. The representative of the Union in San Bernardino wrote as follows concerning this trial:

"The case occupied the Superior Court for five days, there being about twenty witnesses on both sides. The jury retired on the evening of the fifth day, and on the morning of the sixth brought in a verdict in favor of the plaintiff for the sum of \$25 and costs of suit. A very strong defense was made, and had it not been for what we claim a *mis-instruction* of the court, we would have won the case. The jury asked to be instructed by the court the meaning of the words "willful" and "negligence," and in defining the latter is where the error, we claim, was committed, taking the facts from the province of the jury. Mr. Bohn has asked for a new trial."

As Manager I have been appealed to for advice and encouragement in settling disputes relative to the interests of bee-keepers, and their rights under existing law, and I have cheerfully given the necessary time and attention to these cases, and obtained legal advice in order to "defend the rights of bee-keepers" against jealous or envious neighbors.

In January, as Manager of the National Bee-Keepers' Union, I served a notice on the Rev. Robert West, editor of the *Advance*, to either publish a retraction of his false statements relative to the manufacture of comb, filling it with glucose, and deftly "capping the so-called honey-cells by machinery"—or take the consequences of a law suit. After much squirming, he published a retraction, saying: "We were misled by what seemed to be good authority."

In the case of Mr. Freeborn, we are well aware that the bees did not annoy or damage the sheep as claimed. In the case of Mr. Bohn it has been shown that the bees cannot puncture sound grapes, and that they did no damage to the raisin industry. These cases grew out of the jealousy and ill-will of neighbors, and the bee-keepers should be defended in their rights, in the interest of the pursuit in general.

A few cases have been noted where the bees were a *real* annoyance and *injury* to neighbors—in all such cases it is but just and right that the bees should be removed when a compromise cannot be otherwise effected.

THE BEE-KEEPERS OF AMERICA

should lose no time in joining an organization created for the purpose of defending the rights and protecting the interests of bee-keepers. Where there has been only hundreds during the past year, there should have been thousands. It has to some

extent been a trial year—an experiment. It has proven a success even with a small membership. Now let us all co-operate, and, if necessary, maintain our rights as bee-keepers in the highest courts of the land? That can be done only by having sufficient money to defray the expenses, and such are usually high. This will be a small matter, if all will bear their part of the burden. One thousand dollars of expenses when divided among 1,000 persons, is only a dollar for each, and can easily be borne; but when one has to pay it all, it becomes a heavy burden; and, to many, one that would be impossible to bear. United effort is essential to successfully defend our chosen pursuit! If we can raise a column of patriots sufficiently strong to present a formidable front, we shall dare the envious ones to "bring on their law-suits," and by "an imposing array" and "unbroken front," gain a lasting and permanent victory!

It is with considerable satisfaction that I submit to the members of the Union the following

FINANCIAL STATEMENT.

There are 324 members in the Union, and there has been one assessment of \$1 each for the Defense Fund, making \$324; and 25 cents each for the General Fund, for printing, stamps and stationery, amounting to \$81.00. Total receipts, \$405.00.

The expenditures on defense account were for legal expenses and fees in the Freeborn case, \$131; in the Bohn case, \$118.75; leaving a balance in the treasury on June 1, 1886, of \$74.25.

The disbursements from the General Fund for printing, stamps and stationery, have amounted to \$66.00, leaving a balance of \$15 in the treasury.

* * * * *

As I stated a year ago, I neither sought nor desired the office of Manager, and accepted it as a *duty*. I have done my best for the interest of the Union, and am both ready and willing to transfer the office to my successor as soon as such is elected.

Fraternally,

THOMAS G. NEWMAN,
General Manager.

Read at the N. Y. State Convention.

Musings of a New York Bee-Keeper.

WM. F. CLARKE.

A New York bee-keeper, whose native modesty forbids his name appearing in print, has favored me with some notes of his "midnight musings," as he calls them, and I have permission to utilize them in any way calculated to advance the interests of bee-keeping. It may be premised that he is a firm believer in reversible frames, out-door wintering, and hibernation. I have much pleasure in voicing some of these musings and enabling my quiet correspondent to whisper audibly for the benefit of bee-keepers generally. He is evidently impressed with the duty of

letting his voice be heard, for he says: "I expect to pass through this world but once. Any thing therefore that I can do, or any kindness I can show to a human being, or any word that I can speak for others, or any new light I can throw on bee-keeping, let me do it now. Let me not neglect or defer it, for I shall not pass this way again."

How to prevent swarming—or at least how I have prevented it for the past two seasons: I reverse the combs containing unsealed brood once a week during the honey-flow. When so reversed, the bees have invariably, in my experience, destroyed all queen-cells, and gone to work storing honey with renewed vigor.

REVERSING COMBS.

Our mutual friend, Mr. Demaree, on page 260 of the *Bee-Keepers' Magazine*, tells us that reversible frames are all fuss and feathers, and says that in his opinion the verdict of practical bee-keepers will be against them. I wish to say that so far as my experiments go I am paid, and doubly paid, if I gain nothing more than the prevention of swarming, and keep my bees at work while I am away attending to other business. It is no small satisfaction to know that they are busy in the hive, and not up a tree!

CHEAP HIVES.

Mr. Pond, on page 275 of the *American Apiculturist*, writes a good article, but I take exceptions to what he says in favor of cheap hives. He thinks that a hive should be constructed as plainly and simply as possible, with as few "contraptions" as necessity demands, and is of the opinion that a plain box with a few rabbets is all that is needed. Would he advise a \$1 hive for a \$10 queen? Or a cracked box for a \$20 colony of bees? What would he think if I should advise a \$50 harness to put on a \$5 mule? The business-like modern hive with its reversible brood-combs and reversible section-frames; with its side-storing arrangements, movable inside upper story and surplus receptacle, ends of brood-nest packed solid to retain the heat; so arranged that cool nights do not drive the bees out of the body of the hive—requiring no cellar to winter the bees—but so arrayed that with the division-boards placed close to five frames containing the brood-nest, and above that five frames containing the honey stores, all can be packed outside with sawdust 5 inches thick—may not be so charming an object to the eye of the painter or poet as the artistic little single-walled hive on the verge of a splashing mountain brook near an old-fashioned farmhouse, its roof covered with moss, and the queer old couple on their daily rounds among the bees looking for swarms.

But sentiment is a secondary consideration to the practical bee-keeper, and it is the unromantic bee-hive that rapidly coins the golden honey into chinking dollars. A big guarantee from the makers of dollar hives does

not help a bee-keeper much when he comes to place his products in the market. There they must stand or fall on their merits, in competition with the honey stored in the new-process hives, and no guarantee can compensate in the slightest degree for the ignorance of the men who build cheap hives and try to persuade their customers that any thing in the shape of a box so fixed as to hold frames, is as good as the best hive ever constructed. We want a hive adapted to good reversible combs, so that we can get the honey out of the brood-nest and up into the sections, and one in which the bees can be readily packed so they will hibernate and pass the winter in safety. Cheap hives are a nuisance to such as believe in outdoor wintering, and who prefer chaff hives on hibernating principles. Good, double hives built on hibernating principles and good management generally must now co-operate in order to secure even moderate success, and to build up a highly prosperous business, the conditions must be unusually favorable.

ERAS OF BEE-KEEPING.

The first era was that prior to the introduction of the suspended movable frame.

The second has lasted for about 40 years, and has been marked by the use of suspended movable frames, the extractor, and comb foundation.

A new era has now arrived, and we are on the brink of a great revolution. Henceforward hives will be handled instead of frames, the extractor rarely used, and surplus honey produced in the comb, and kept stored in a state of nature until sold and eaten.

DISCOVERING THE ADVANTAGE OF REVERSING COMBS.

One day I and a few fellow bee-keepers were experimenting in my apiary. Mr. Dakin and myself were looking over a hive, when we accidentally broke a very heavy comb of honey in such a way that we could not return it to the hive right side up. Mr. Dakin said that we must put it back somehow bottom side up. I took a saw and cut off both ends of the top-bar close up to the side-bar. Reversing the frame, we tacked a strip to the other side of the frame as a top-bar, so the frame would hang suspended as before, only the other side up. We closed the hive, put on the honey-board, also the sections, and left the hive for about one week. When it was again opened, we found the honey all removed from the reversed frame and stored in the sections.

I again tested the effect of reversal with an old box-hive, placing an empty Langstroth hive on top of the box-hive, now bottom side up. We cut a hole in the bottom-board of the Langstroth hive. In less than three weeks the bees had transferred themselves and all their stores to the Langstroth hive. Many subsequent experiments with reversed frames have satisfied me that bees will work more vigorously and gather just as much honey, and I think more than if

the extractor is used. Bees appear to get discouraged if you take away their hard earnings with the extractor; whereas, by reversing the brood-combs, the bees find the honey out of its natural position, and will at once all go to work to elevate it and place it just where you want it—in sections ready for the market or table. This is a great advantage, for we all know that honey in sections will command a higher price than the extracted article, so augmenting the profits of the bee-keeper.

CHIEF ADVANTAGES OF REVERSIBLE FRAMES.

I now make my frames not only reversible, but interchangeable, for use in these ways, viz:

1. As brood-frames.
2. When empty of combs or foundation, they answer for sections.
3. In this form they can be placed outside the brood-frames for side-storing, and when nearly full of honey, they can be lifted out, reversed, and then placed in top, movable, interchangeable surplus-arrangements—bees and all. New side-storing sections can be put in their place to be reversed and placed on top in their turn as the honey-storing proceeds. By this means we start the bees at top-storing, and get them the more readily to finish up sections.
4. When the brood-frames are reversed and the bees remove the honey "up-stairs," the queen has more room to deposit her eggs, and thus a smaller number of frames answers for the brood-nest.
5. Next follows a most important advantage. All queen-cells will be destroyed and swarming prevented by reversing the brood-combs. If this be done every six or seven days during the honey-flow, the bees will devote all their energies to honey-gathering until the harvest is over, when they may be divided, one-half receiving a new queen.

DOUBLE-WALLED HIVES.

Having worked single and double-walled hives side by side, I know that fully 50 per cent. more honey can be obtained in the double-walled hives. In single-walled hives the bees are apt to forsake the section cases during cool days and nights, while on hot days and nights they hang out and refuse to work. It is then that the swarming fever is apt to seize them in the very height of the honey-flow, and much valuable time is lost when it is most precious. The fluctuations of temperature do not affect double-walled hives, and the bees keep the even tenor of their way and work while the season lasts, without let or hindrance. By the use of double-walled hives we get brood quicker in the spring (as in heat there is life, and in cold there is death), and a steady warmth without fluctuations is essential to brood-rearing.

Recognizing these indisputable facts, various difficulties are surmounted, such as, how to keep the bees at home; how to make them gather honey whenever there is any to be had; how to make them place it

in where the owner can sell it in its natural shape, as the bees make it, so dispensing with the extractor, honey-boards, and single-walled hives.

One item more: Single-walled hives cannot with safety winter bees on the summer stands, and for one, I will quit the business if I cannot winter my bees on the summer stands.

I winter bees on the summer stands as follows: First, I contract the brood-frames to six, and push up the division-boards snug. This I do about Sept. 15, after taking all surplus caps away. Afterwards I put the surplus-arrangement above the brood-nest, which is the same size as the six frames below. Into that I put five frames of solid, well-ripened honey, which gives the bees at once a sufficiency of natural stores. I cover them with a woolen sack of sawdust. I now have a hive inside of another, as one would say, 9 inches wide by 15 inches long, and 21 inches in depth, surrounded with 5 inches of packing on all sides and the front, both with sawdust 21 inches deep, and the sack on top makes 4 inches more. I now bank up on the back and sides with earth nearly 4 inches, so that no air can get under the hive. The entrance I leave open 5 inches by $\frac{3}{4}$. On that plan I have been successful.

It will be noticed that I place the honey above the bees, which is where they would place it if they had the chance to do so. Naturally bees go up instead of sidewise in search of stores. I never look for pollen, neither do I feed sugar. Honey is what they want, and honey they shall have. You may say it is extravagant to give the bees so much honey. What do they want with 50 or 60 pounds of stores? Well, I know how to dispose of what they do not consume. In the spring I take away the five upper frames, and replace with frames of sections with foundation starters as early as it is safe to unpack them. What honey is left in the frames taken away I uncap and put them below, outside the division-boards, which space allows two frames on each side. The bees will have a busy time elevating the honey to the sections, and will set the queen to at once put the crown on her head and make things hum.

Here I am in the sixth season, with the best record yet as to wintering my bees. Here I am the third season with the best record I ever had, getting on the average, spring count, *two hundred and eighty pounds per colony*. So much in favor of reversible frames and double-walled hives, being a surplus over single-walled hives and suspended frames of 200 pounds per colony in the same locality.

Now, to be more definite in setting forth the claims of reversible frames as compared with suspended ones, I make the following calculations: Safety in wintering, 20 points. This is because they are packed early, giving them natural stores in their proper position, and left on the summer stands where they are not looked at nor disturbed in the least until settled weather in the spring.

Economy, 20 points in two ways: First, not so many hives to handle;

second, placing the honey in a compact form, easy to sell, and dispensing with the extractor, and daubing up the entire apiary with cappings and empty frames.

Convenience, 10 points, because we manipulate a hive in 20 minutes or less, and the hive is as easy and light as a single-walled hive.

Superiority, 40 points, because we can get nearly 60 per cent. more honey out of our bees. The reversible frame is no longer an experiment. Experience has demonstrated its superiority, and if I were obliged to return to the suspended frame, I would quit the business altogether. The reversible frame is free from all complications, and easy to manipulate. Its rival, the suspended frame, has received honorable dismissal from my apiary, its day being done, its usefulness gone, and its place more effectively filled by its reversible successor.

Guelph, Ont.

For the American Bee Journal.

Wintering Bees in Warm Temperatures.

IRA BARBER.

Mr. C. Theilmann, on page 311, tells us that he has had trouble with bees this spring, by their getting too hot. He says that he kept them in a building above ground, and that between the warm weather and the great heat that the bees created, they became so hot that they nearly suffocated. I do not doubt his statement in the least, for I had just such a case as he describes, some 30 years ago.

I do not consider his criticisms of my plan of wintering bees just or manly; nor do I think that he has any reason for connecting it with the plan that I gave in the essay that he mentioned. I stated that the cellar should be damp where the temperature was allowed to become so high, and that no currents of fresh air should reach the bees.

Mr. T. asks if my article would not have misled many bee-keepers had it not been for Mr. Doolittle's sad experience in warming his cellar by burning coal oil. Now I wish to say that I have never recommended his plan, for the reason that it did not prove a success with me. I have never tried Mr. Doolittle's plan, for the reason that it proved a failure with him; but I did wish last winter, that I knew of some way to raise the temperature of my bee-cellar about 40° higher than it was.

Again, he says that I have gone down one-half in my idea of the proper temperature, and asks me to account for it. The explanation is very easy, for my bees are now at home, and are wintered in a large cellar, one that 600 colonies could be wintered in, and not crowd it as the one was crowded when the high temperature was given.

The reason why a thermometer was not used, was because my bees were 20 miles from my home, and I was satisfied with the tests that I was able

to make in November and April. I have not given a colony ventilation at the top of the hive for 20 years, while in winter quarters. Mr. Doolittle said that I knew nothing about the temperature of my bee-cellar. Is it not reasonable to suppose that if the temperature was 65° in the cellar, when the mercury was near zero outside, and at 65° outside the mercury showed 90° inside, that the temperature was but slightly affected either with heat or cold?

Mr. T. thinks that the mass of bees 5 feet high were smart bees to be able to separate all right. As he only gave the height of the mass I will give the length of the pile, which was 19 feet, and the width 13 feet—all one solid mass of bees, to all appearance, and yet all the loss was just one queen. Does any experienced bee-keeper believe that a door could have been opened to cool them off, without a great loss? They were left to cool off slowly, when the weather changed.

I have no time to follow Mr. Theilmann in all the points he has taken exceptions to regarding my high-temperature theory, but I will say to him, and all others who may doubt my statements, that there can be nothing said by any one that can change the fact, that it proved a complete success for the 6 or 7 winters that I wintered my bees in that way. Why, I have been wintering my bees at 45° to 50° for the past two years, is because they winter fairly well; and I have not yet been to the expense of partitioning off the cellar, for the reason that I may take my bees away to better fields at any time when our pasture for bees fails in this locality. I hope that none will try to winter their bees at so high a temperature in a dry room or dry cellar, for my experience is that it cannot be done without heavy loss.

De Kalb Junction, 3 N. Y.

For the American Bee Journal.

Eradicating Foul Brood.

JOS. H. FISHER.

In this neighborhood foul brood has existed for nearly a year, and most of our bees, both tame and wild, have been thoroughly inoculated with the disease. Even if we could effect a cure, under these circumstances, would they not bring the disease home again from our neighbor's defunct apiary, old combs and hives lying around loose, bee-trees, etc.?

I would not discourage apiculture by any means, for the value of honey for medicine alone, if for nothing else, could not be dispensed with. But, let us face the truth and the evil, and fight our best to exterminate it. There are remedies to stay the disease and keep it in bounds, that are but little expense or trouble, but I cannot say that it will effect a cure, except with the aid of time and surrounding circumstances.

I have melted all my old combs into wax, and subjected my frames to a heat that would kill any animal or

vegetable matter, and have laid them carefully away for future use, where they will not be exposed to the disease until I am sure it is safe to use them. My hives I shall heat in the same way; or clean and repaint on the inside and out, making all cracks and joints as tight as wax. I have a few healthy colonies that I shall watch very closely, and will not try to increase my stock, and I will treat with the best remedy I know of, until I lose them or effect a cure.

It might be a good idea to call a bee-keepers' convention and devise some means to exterminate this thing; and by so doing we can act in harmony. I think unless every bee-keeper takes an interest in trying to annihilate this foul brood, it will be hard to get rid of.

Napoleon, Ohio.

For the American Bee Journal.

Description of the Hive I Use.

J. H. ANDRE.

Last season I gave a description of a new hive that I had tried, and as I have made some alterations and improvements in it, I will describe them also.

For the body of the hive use lumber 29-32 of an inch thick, cut 16 inches in length. Use square strips in the corners to nail through, of the exact thickness of the lumber, and nail through both ways. This is far better than a mitre joint, as it cannot give, warp or split. The body of the hive is 11 $\frac{3}{4}$ of an inch deep, with frame-rests cut down all around the top $\frac{1}{4}$ of an inch, and $\frac{1}{2}$ of an inch back. A cross is put in exactly in the centre of the hive, of 5-16-inch strips, 1 $\frac{1}{2}$ or 2 inches deep. The frames are made of $\frac{1}{4}$ x1 inch, and 7x10 inches inside; 20 are used. Hang in 5 in each space, with the inside one nearly close to the cross-piece, and with their inside ends close against it. The inside top-bar should project only $\frac{3}{4}$ of an inch, and the outside one $\frac{1}{4}$ of an inch. Opposite corners should be warm frames, and the other two cold ones. This gives the bees a chance to get to any part of the hive without going under or outside of the frames, and a frame of brood or honey may be taken as desired.

In shipping, 4 or 5 frames will go in a little space, and be in neat shape.

A colony may be confined in $\frac{1}{4}$ of the hive and winter safely. No tin rests are needed, as the inner ends of the frames may be loosened easily.

For the bottom use pieces 22 inches long, one 8, and the other 10 inches wide, with an entrance cut in $\frac{3}{8}$ x12 inches. Bevel the edge of a piece of board 4 $\frac{1}{4}$ inches wide, to give it 1 $\frac{1}{2}$ inches drop, and fasten it to the end of the bottom-board at the front with a hinge at each end; this gives an incline, and in winter it may be turned back, and if wintered out-of-doors it will keep out the snow; if wintered in-doors it will keep out the light, and takes less room; but it does not close the entrance.

The bottom is $\frac{3}{4}$ of an inch thick, as is also the cap. The side-pieces of the cap are 7 $\frac{1}{4}$, and 18 inches long. The gables rise to 9 $\frac{1}{4}$ inches. The roof is 12x22 inches (two pieces of course). The cap is nailed together with strips in the corners, the same as the body of the hive. The case rests on top of the hive, and may be arranged as desired. I have used some cases without any divisions, simply by nailing strips across the bottom of the case where the sections come together. I believe that style will be used altogether in the near future, for it is less work to make it, and in taking out and putting in sections it requires not half the labor. More room may be used on a hive, and it is warmer for the bees.

To make three hives it needs one board $\frac{3}{4}$ x12 inches, and 12 feet long, for roofing; one 29-32x12 inches, and 16 feet long, for bodies; one $\frac{3}{4}$ x10 inches, and 16 feet long, for caps and bottoms; and one $\frac{1}{4}$ x8 inches, and 16 feet long, for caps and bottoms. Only three different widths are used, and the lumber cuts without waste.

After examining plans of all the hives I have ever heard of, I have adopted this, for it is the only style that may be used and have the brood-chamber in the shape it should be—square—without heavy, unhandy frames, and also secure the other advantages described above.

Lockwood, N. Y.

For the American Bee Journal.

Changes in Apiarian Fixtures.

T. E. TURNER, (50-90).

In looking over the pursuit of apiculture for a few years past, and viewing the many changes that have taken place, and that have been advocated by bee-keepers, the inquiry has arisen in my mind, have not too many changes been made in apicultural fixtures for the interests of apiculture in general? I verily believe that "too much change" for beginners is very discouraging, and that in some way there should be more uniformity among bee-keepers, in the hives, sections, section-racks, and shipping-cases used, allowing a change in these and other things used in the apiary only after something better has been tested and adopted by many of the most experienced apiarists.

Every beginner, especially of small means, should have the very best and cheapest appliances to begin the business that can be obtained. If he gets catalogues from different supply dealers and examines them he will find a great many different hives, sections, section-racks, or surplus arrangements, shipping-cases, and various other things, in use and highly recommended for use by those engaging in the pursuit, and he is bewildered. He knows not which to adopt, and is just as likely to choose the poorest one of the list as the best, until he has experience and knows

what is best. Experience in this matter has prompted me to write this article for the benefit of the inexperienced.

There is but one solution of this difficulty, and that is for the beginner to take the advice of some reliable bee-keeper of his acquaintance, as to what fixtures he should use, and the advice given will generally be such as should be followed. There also should be a recommendation, adoption, and use of an article by several experienced bee-keepers. The writer has recommended hives that he was using himself for the adoption and use of beginners, but now, after 13 years' experience in the use of various hives, and watching the reports from different experienced bee-keepers, he can heartily recommend to beginners a hive that he does not use.

Look at the changes in hives from what was formerly used. In my A B C days in bee-keeping, we had a hive in two sections, with a double set of frames of the Gallup style. Then we had the patent Buckeye hive, with a shallow surplus frame on top of the brood-frame; then we used the hive invented by Rev. L. L. Langstroth, for a short time, until a bee-keeper made for us what he claimed was better than that, a 9-frame hive, 11x16 inches inside measure. After a careful research after the best hive for all purposes in four years, another change was made, and the bees were moved into a Langstroth style of hive holding 8, 10, 11, 12 and 13 frames, 11x11 inches inside measure, where they still reside. Having visited many bee-keepers who had more varied experiences in changing from one hive to another than myself, the universal opinion expressed is that there has been too much change in hives among bee-men.

One uses a particular hive with a specific object in view, and he will keep on changing hives until that object is attained. Another individual will start out with a different hive, with a different object in view, and he will repeat the conduct of the first, until he finds the hive to suit the special purpose. Then the same individual may have different objects to gain at different times, and if they are numerous, he will find that different hives must be used to accomplish them. Then the wise apiculturist wants the hive that is adapted to the attainment of the greatest number of objects, in order to be successful in the highest degree. Bee-keepers want to keep in view the fact that success in their pursuit is somewhat like that in other pursuits—the greater the number of ends successfully met by the use of a single instrument, the better in the economy of time and expense, other things being equal.

Though I am not using the Langstroth hive, but may use it in the near future, and have no hives of any kind for sale, my advice from past experience would be to all beginners, to adopt and use the 8 or 10 frame Langstroth hive, as adapted to accomplish the greatest number of apicultural objects of any hive adopted and

recommended by a large number of the "experienced." Every feature that is of any "intrinsic value" to the great mass of bee-keepers, experienced or inexperienced, is contained in it.

New hives, or anything new for the use of bee-keepers, that is of value, should be encouraged, but beginners should beware lest they are driven here and there until shipwrecked in the beginning of an apicultural voyage by various recommendations of new things; far better for them to accept and act upon the advice that comes from the experience of many tried sailors on this line. Experimenters are a great blessing in apiculture as well as in any other pursuit, and yet the results of their labors should be tried and recommended by the experienced rather than by the beginner; for one is better prepared for failure than the other, if such should be the result. Change is all well enough when it is made with caution, but too much change is both expensive and dangerous to our pursuit.

Sussex, O. Wis.

For the American Bee Journal.

Feeding Sugar Syrup to Bees.

EUGENE SECOR.

I am glad to see the AMERICAN BEE JOURNAL, and many prominent bee-keepers also, expressing themselves on what I have always thought to be the right side of this question of feeding. There is little use in bee-keepers, i. e., honey producers, trying to quiet the public fear of adulteration when any considerable number of them practice feeding on a large scale. If we cannot make bee-keeping pay by utilizing only the nectar provided by nature for this purpose, I am certain that in the outcome we shall not by supplying cane syrup to winter our bees on.

But many apiarists are not content to feed merely enough for winter, but supply it also in the spring, and some of them in the summer, during a cessation in the natural yield. Now, I do not care how many professions of honesty a man may make, I do not believe that there is one living so far above suspicion that if he feeds his bees anything cheaper than honey, but what some of his neighbors will say that his honey was not gathered by the bees; and if they repeat the story of his practices, a great many people will cease to use honey, because, as yet, it is only a luxury, and very few persons will buy, if they do not believe it to be the actual distillation of flowers—something which they can get in no other way.

If the practice of feeding sugar for the purpose of increasing the yield of honey continues, the time will come, when, by the increase of the product and the decrease of consumption through fears of being defrauded, honey will be cheaper than sugar. That time has nearly arrived now on the east side of the Rockies, while on

the west side it has actually been the cheapest. In California I suppose they never feed sugar, and no one would ever expect to find adulterated honey there.

In the Northern States the practice is defended on the pollen theory argument that pure cane-sugar is the only safe winter food. If that is so, this world has been running wrong for a long time. If the Almighty ever makes another planet which is to be the home of honey-bees, some of these nineteenth century discoverers ought to be called to the council before the job is undertaken.

When I am convinced that grass is not the proper food for the cow, and that the pig's nose was made for ornament and not to dig artichokes with; that hens ought to chew the cud and sheep roost in the old apple-tree, I may come to the conclusion that God did not know what He was about when He provided honey as the proper food for bees.

But I do not wish to argue the pollen theory or any other theory. We ought to produce only the pure article of honey, and to convince people that we are doing it, we must avoid the appearance of evil. Suppose a few colonies do die in winter because they happen to have too much pollen, or because we do not know enough to regulate the temperature so that they will not eat it; or suppose the remainder do not store quite so much surplus honey because they have to lay by enough to winter on; perhaps what they do give us will bring just as much money, because a scarcer article.

To illustrate: It requires a certain number of bushels of wheat to feed this world for a year. If a few millions less than the required amount were produced in any one year, would it not bring about as much money as though the crop were twice what was needed? But honey is a luxury, and he will succeed best who produces the nicest article and gets it to the consumer with the least suspicion of fraud about it. There are always plenty of people who will buy such luxuries and pay good prices for them.

Buying sugar by the barrel to feed bees, and selling honey by the drayload is not for the best interest of the industry, in my opinion.

Forest City, O. Iowa.

Honey as Food and Medicine.

To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, \$2.50. Five hundred will be sent postpaid for \$10.00; or 1,000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the beekeeper who scatters them).

Local Convention Directory.

1886.	Time and place of Meeting.
July 6.—Hill County, at Peoria, Tex.	H. A. Goodrich, Sec., Massey, Tex.
Aug. 31.—Stark County, at Canton, O.	Mark Thomson, Sec., Canton, O.
Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.	Ferd Zastrow, Sec., Milwaukee, Wis.
Oct. 12-14.—North American, at Indianapolis, Ind.	F. L. Dougherty, Sec., Indianapolis, Ind.
Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ill.	J. M. Hambaugh, Sec., Spring, Ill.
Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.	H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM OUR LETTER BOX

Working on White Clover.—J. L. Strong, Clarinda, Iowa, on May 31, 1886, writes:

Bees wintered well, and they now gather honey from white clover, when the sun shines hot. Unfortunately we have had but few days of clear weather since fruit bloom came out. Last Saturday the gain was 3½ pounds in one colony on the scales. Yesterday it was rainy, but to-day they are booming again, and I think the increase will be better than it was Saturday.

Return of Swarms.—A. H. Lind, Calumet Harbor, O. Wis., on June 3, 1886, writes:

On May 17 one of my colonies cast a swarm, but the bees soon returned to the hive; on May 18 and 19 they did the same thing; on the 19th I put on the sections and they did not swarm again until May 23, but then again returned to the hive. That day I heard young queens. On the 24th they swarmed with success. What was wrong with that colony?

[The queen was evidently from some cause unable to go with the bees, until the 24th, when a young queen accompanied them.—Ed.]

Flattering Prospects.—Mr. E. M. Coombs, Memphis, Ind., on June 1, 1886, says:

The prospect for honey is very flattering. I have extracted about 60 pounds, and have had two good swarms. I lost one on account of being away from home.

Paper Comb.—D. Brown, Cuero, Texas, writes:

In conversation with a gentleman from Kentucky, the subject of bees came up, and he said that he had a cousin in Kentucky who had about 200 colonies of bees, who used artificial comb made from paper, and

who said that the comb was perfect, cells of the right size and proper depth, and sold for 50 cents per yard. All the bees had to do was to wax the paper and fill it and cap it. He was sure that he was not mistaken. I have been working with the bees 6 years, have been a constant reader of the BEE JOURNAL for 4 years, and I have never heard of this "paper comb" before. If there is such a thing, why is it not spoken of or advertised?

[There is no such thing. The man is mistaken, and like many others, talks about something he knows nothing of.—ED.]

Swarms and Swarming.—R. F. Holtermann, Brantford, Ont., writes:

In answer to Mr. J. C. Rawlins, on page 330, I would say that I have had a natural swarm with nothing nearer a queen than eggs in the queen-cells. The swarm may have come out sooner than it intended, owing to my having examined them a few minutes before they issued. Doubtless they had filled themselves with honey and were nearer being ready for swarming. My first swarm, this year, I had on May 29. It was a fine one.

Queenless Colony, etc.—D. R. Rosebrough, Casey, O. Ills., writes:

In my spring report I stated that I had a queenless colony. It has a queen now, but it is not worth as much by \$5.00 as the others, for all the other colonies are overflowing with bees, and are working in the surplus apartments. The one that had to rear a queen is only a mere nucleus. Speaking of bees as a nuisance, I have my bees very near a house in which lives my tenant, and he calls my bees tame bees. A part of them are Cyprians. The only trouble is in winter, when the bees speck the clothes hung out to dry.

Length of Drones' Wings.—Dr. G. L. Tinker, of New Philadelphia, O., says:

Recently I have taken the measurements of a large number of drones' wings, and find more variation than I had supposed. The Italians measure quite uniformly $\frac{1}{2}$ inch in length, and 5-32 of an inch in breadth of the large wings. Pure Carniolans are from 1-16 to 1-32 shorter, and the same width. Some of my best Syrio-Albino drones have wings nearly 9-16, or almost 1-16 of an inch longer than those of any other I have found. The breadth is also slightly more than 5-32 of an inch. It occurs to me that such drones are the ones we should get our queens mated with. If we select the most active and swift-winged it will surely add one good point to our stock in breeding up a superior strain of bees. I should be glad if others would take measurements of their drones' wings and report in the BEE JOURNAL. Have any got drones with wings longer than 9-16 of an inch? If

so, does the race possess superior qualities?

Honey Locust.—C. H. Dibbern, Milan, O. Ills., on May 27, 1886, writes:

I send two specimens of the bloom of the honey locust. You will observe that they are entirely different. Please tell us through the BEE JOURNAL if these are different species, or are they male and female? I will state that they grow on separate trees, and there seems to be about an equal number of each.

[The flowers of the honey locust are what the botanists call *polygamous*, that is, they are sometimes perfect, having both stamens and pistils, and sometimes these organs are in separate flowers. In this case they are evidently upon different trees, and the case is not a very uncommon one. Probably these trees will continue year after year to do just the same thing; still it would not be surprising upon close looking if some of both kinds of flowers should be found on the same tree. I find on one of the specimens sent, both the male and female organs.—T. J. BURRILL.]

Drouth in Texas.—B. F. Carroll, Dresden, O. Texas, on May 31, 1886, writes:

We have not had a drop of rain since April 24. The honey crop is a complete failure. The horse-mint is in bloom, but we get no honey. If we get rain soon we may have a few pounds from the cotton bloom.

Extracting, Prolific Queens, etc.—26—Jonas Scholl, (72-70), Lyons Station, O. Ind., on May 27, 1886, writes:

I commenced extracting to-day—16 days earlier than last year, and 10 days earlier than two years ago. The honey is quite thick, and very good, being mostly from poplar bloom. Bees wintered just splendid the last four years. I winter my bees only on the summer stands, and on natural stores with blankets and leaves above. For rapid increase of brood through April and May, I have not yet seen any better or more convenient arrangement. The leaves and blankets stay on until ready for the surplus arrangement. I have this spring taken more particular notice of the spreading of the brood-nest, and among 70 colonies I have seen but few that failed to rear brood to the very top-row of cells in the frames; so that reversing would not pay on that score. Perhaps my way of retaining the heat above the cluster has something to do with it. On page 279 Mr. Heddon makes a statement that I think should not go unchallenged. He says: "By interchanging and inverting we can develop one half more brood than we get from the same brood-capacity in

non-invertible hives." Now I claim to have queens just as prolific as any that Michigan can produce, and if he were here I could show him some 65 of them that are running 10 Langstroth frames to their full capacity of brood; and to get them to do double, or even one-third more by any reversible arrangement, is simply impossible. The time set for the meeting of the North American Convention, at Indianapolis, on Oct. 12-14, 1886, is certainly very appropriate, and will, I think, suit Indiana bee-keepers generally.

Excellent Season So Far.—Wm. B. McCormick, Uniontown, Pa., on May 29, 1886, says:

We have had an excellent season so far in this section for bees and honey. The white clover is now in full bloom, and the bees are booming. So far I have had 12 swarms, two of which were second-swarms; the first being on May 18.

Abundance of White Clover.—Alex Rose, Sullivan, O. Ills., on May 31, 1886, writes:

I am among the bees every day. I wintered 22 colonies out of 24, only losing one, and one was queenless, with which I have a swarm which is doing well. I bought 9 colonies this spring for \$9, and I now have 48 colonies. Some of the hives of the old ones are full of honey, and the bees have commenced to cap it over, but swarming checks that for a few days. I have been keeping bees for 8 years, but I never have seen such a crop of white clover—the country is perfectly white with the bloom. The linden or basswood is beginning to bloom. I am looking for a large crop of honey this year. I use 2-pound sections. I sold honey last year for 20 cents per pound in sections. Some in frames and some broken up honey I sold for 10 and 15 cents per pound. I do not expect so much this year. My record shows that I put on sections last year on June 16; this year from May 6 to May 12. I expect to take off several hundred pounds of honey before June 16, this year.

Convention Notices.

The 5th regular meeting of the Hill County Bee-Keepers' Association will be held on the first Tuesday in July, 1886, at the apiary of Hon. J. M. McDaniel, of Peoria, Tex. At the same time and place will be held a bee-keepers' honey picnic.

H. A. GOODRICH, Sec.

The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, Sec.

The regular semi-annual joint meeting of the bee-keepers of Hendricks and Boone counties of Indiana, will be held on Thursday, June 17, 1886, at the residence of J. P. Catterson, 4 miles northeast of Brownsburgh, Ind., and 2 miles west of Trader's Point. A cordial invitation is extended to all.



Issued every Wednesday by
THOMAS G. NEWMAN & SON,
 PROPRIETORS,
 923 & 925 WEST MADISON ST., CHICAGO, ILL.
 At One Dollar a Year.

ALFRED H. NEWMAN,
 BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with \$4.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two new subscribers besides their own, with \$3, for one year, we will present a copy of this valuable book.

Our New Catalogue of Bee-Keepers' Supplies for the spring of 1886, is issued, and will be sent to any one desiring a copy. Send name and address, plainly written, on a Postal Card for it.

"Don't Stop"—that is what many write to us about their papers, when their time is nearly out. One subscriber says: "This has been a year of disaster, and it is not convenient for me to send you the money now to renew my subscription. It runs out with this month; but don't stop sending it. I will get the money to you within three months." Such letters are coming every day, and so for the present we have concluded not to stop any papers until requested to do so.

The Convention History of America and the AMERICAN BEE JOURNAL for one year, will be clubbed for \$1.15.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
 Monday, 10 a. m., June 7, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Honey of all grades sells slowly at present, and prices are weak—14@15c. being the outside figure for best comb honey. Extracted is in light demand at 5@7c. California comb honey, in 2-lb. sections, 9@12c.

BEESWAX.—25c. for good yellow.
 R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—We now quote: Fancy white comb in 1-lb. sections, 12@13c.; in 2-lb. sections, 9@10c. Fancy buckwheat honey in 1-lb. sections, 9c.; in 2-lb. sections, 7@8c. Off grades 1@2c. per lb. less. Extracted, white, 6@7c.; buckwheat, 5@5½c. California, 5@6c.; Southern, as to color and flavor, per gallon, 50@60c.

BEESWAX.—27@28c.
 MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 13@15c.; 2-pound sections, 11@13c. Extracted, 6@8c.
BEESWAX.—25 cts. per lb.
 BLAKE & RIPLEY, 57 Chatham Street.

SAN FRANCISCO.

HONEY.—The first new comb honey of the season—a sample lot of extra choice—brought 14 cts. We quote: White to extra white comb, 11@14 cts.; amber, 7@10c. Extracted, white liquid, 4½@5c.; light amber colored, 4 to 4½c.; dark amber colored, 3½ to 3¾ cts.

BEESWAX.—Quotable at 20 to 24 cts.
 O. B. SMITH & CO., 423 Front Street.

DETROIT.

HONEY.—The market is almost bare of comb honey, and very little is wanted. Best white in 1-lb. sections 14 cts.
BEESWAX.—Scarce at 25c.
 M. H. HUNT, Bell Branch, Mich.

ST. LOUIS.

HONEY.—Choice comb, 10@12c. Strained, in barrels, 3¼@4c. Extra fancy of bright color and in No. 1 packages, 4 advance on above prices. Extracted in barrels, 5@5½c. Fermented goods, 2¼@3c.
BEESWAX.—Firm at 22c. for prime.
 D. G. TUTT & CO., Commercial St.

CINCINNATI.

HONEY.—Trade is perhaps duller than usual. We quote: Extracted honey brings 4@5c., and choice comb honey brings 12@15c. in a jobbing way.
BEESWAX.—In demand at 20@25c. for yellow.
 C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—There is an excellent demand for best 1-lb. sections of white honey, and all arrivals sell readily at 14c.; 2-lbs. and glassed sections sell slowly at 12c. Extracted, 7@8c.
BEESWAX.—Scarce at 25@26c.
 A. C. KENDAL, 115 Ontario Street.

KANSAS CITY.

HONEY.—Sales of comb are good, while extracted is very dull and low. One-pound sections are scarce; stocks of all other grades are well supplied. Calif. 2-lbs. bring 11@12c.; Eastern 2-lbs., 12@13c.; 1-lbs., white, 14@15c.; dark, 12@13c. Extracted 5@6c.; Southern, 3¼@4c.
BEESWAX.—23c.
 CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market seems quite dull for all qualities of comb honey, with but a moderate demand for extracted. We quote: Choice, white 1-lb. sections, 17@18c.; the same in 2-lbs., 16@17c.; dark 2-lbs., 15@16c. Extracted, white, in barrels or kegs, 7@8c.; dark, in same packages, 6@7½c.
BEESWAX.—24@25c.
 A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—Small lots of new are arriving, both comb and extracted. There is some inquiry for best qualities, and sales of choice honey can be made in a small way to fair advantage. White to extra white comb, 11@14c.; amber, 7@10 cts. Extracted, white liquid, 4½@5c.; light amber colored, 4@4½c.; dark amber colored, 3¼@3½c.
BEESWAX.—20@24c. in lots from first hands.
 SCHACHT & LEMCKE, 122-124 Davis St.

To any One sending us one new subscriber with their own renewal (with \$2.00), we will present a copy of the new "Convention History of America."

OUR CLUBBING LIST.

We supply the American Bee Journal one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

The American Bee Journal	Price of both. Club
and Gleanings in Bee-Culture	2 00.. 1 75
Bee-Keepers' Magazine	2 00.. 1 75
Bee-Keepers' Guide	1 50.. 1 40
The Apiculturist	2 00.. 1 75
Canadian Bee Journal	2 00.. 1 75
Texas Bee Journal	2 00.. 1 75
The 7 above-named papers	6 50.. 5 50

and Cook's Manual	2 25.. 2 00
Bees and Honey (Newman)	2 00.. 1 75
Binder for Am. Bee Journal	1 75.. 1 60
Dzierzon's Bee-Book (cloth)	3 00.. 2 00
Root's A B C of Bee-Culture	2 25.. 2 10
Farmer's Account Book	4 00.. 3 00
Guide and Hand-Book	1 50.. 1 30
Heddon's book, "Success"	1 50.. 1 40

Italian Queens.—We can supply them by mail, postpaid, at the following prices: Untested, \$1.00; Tested, \$2.00; 6 Tested Queens for \$9.00.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

System and Success.

All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are reduced, as follows:

For 50 colonies (120 pages)	\$1 00
" 100 colonies (220 pages)	1 25
" 200 colonies (420 pages)	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Advertisements.

ITALIAN QUEENS.—Tested, \$2.; Untested, \$1.00.
 MISS A. M. TAYLOR,
 23A2t MULBERRY GROVE, Bond Co., ILL.

Syrian Queens by Return Mail.

TESTED, \$1.50 each; Untested, 75 cts. each; 12 for \$8.00.—ISRAEL GOOD, Sparta, Tenn.
 23D4t

HONEY JARS, Bee Hives, Sections, Smokers, and Stanley Extractors.
 Best Quality. Lowest Prices. Send for price lists to
TYGARD SONS,
 23A2t 2119 S. Jane-st., Pittsburgh, Pa.

Friends,
 MY Nuclei are full of fine Queens, and I am about up with my orders. I warrant them purely mated. Price, 75c. each, or \$8.50 per dozen. Send money in Registered Letter to
IRA D. ALDERMAN,
 23A1t TAYLOR'S BRIDGE, Sampson Co., N.C.

ITALIAN QUEENS
 BRED from purest and best working stock. I will fill a limited number of orders at the following prices: Untested, \$1.00 each; Tested, \$2.00 each; Selected for breeders, \$3.00 each. Good Hybrid Queens, when on hand, 50 cts. each.
G. W. DEMAREE,
 23D4t CHRISTIANSBURG, KY.

THE WESTERN WORLD GUIDE and HAND-BOOK OF USEFUL INFORMATION.

For HOME SEEKERS or Tourists,
Capitalists or Laborers. A vast
amount of information not
to be found elsewhere
at any price.

A cloth-bound book, 4x7 inches, 288 pages
Price, 50 Cents.

The following is only a part of the Contents:

Colored Maps of all the States and Territories,
including Alaska and District of Columbia.

Diagrams showing area, population, products,
Government, State, School and Indian Lands of
the several States.

Histories of each of the States from the
Earliest Times.—Descriptive of their Topog-
raphy, Soil, Climate, Rivers, Mountains, Natural
Wonders, Population, Area, Islands, Lakes,
Minerals, Products, Manufactures, Industries,
Cities, School Systems, Collection and Exemption
Laws, Date of Holding Elections, Number
of Representatives, Senators, Congressmen, and
Presidential Electors, Number of Union and
Confederate Soldiers in the Field, Price of Land
Cleared and in Forest, Extent of Forest, Num-
ber of Different Callings, Rate of Interest, Usury
Laws, PEDDLER OR DRUMMERS' LICENSE LAWS,
DIVORCE LAWS, MINING LAWS, DESCRIPTION
OF PUBLIC LANDS, LIST OF LANDS SUBJECT TO
THE FORMS OF ENTRY, List of Land-Offices,
Opportunities for Homes or Enterprise, Rain-
fall, Health, Ports of Entry, Population (male,
female and foreign) Number of Indians, Mineral
Resources, Nicknames of States and for whom
or what they are named, Miles of Railroad and
Canals, Tidal Frontage, STATE LAND LAWS,
Religious Denominations and their Numbers,
Number of Counties and Names.

Government Land Laws giving complete law
on the subject of PRE-EMPTION HOMESTEAD,
TIMBER CULTURE, SOLDIERS' HOMESTEAD,
SWAMP LANDS, LAND WARRANTS, SCRIP,
INDIAN TRUST LANDS, DESERT LANDS, COAL
LANDS, TIMBER LANDS, MINERAL LANDS,
AGRICULTURAL COLLEGE LANDS, ETC.

How to Acquire Lands of any kind belong-
ing to the Government by any forms of entry;
who may acquire them, and the different laws
applicable to the different sections.

Postal, Pension and Patent Laws of the
United States.

Costs-of-Arms of the States and Views of
Celebrated Places, and of life in different regions.
Rules for measuring Lumber, Logs, Grain,
Liquids, Tables of Weights and Measures of all
kinds, Interest Rules and Tables, Lumber Tables
Systems of Land Measures in various
parts of the United States.

Contains also a Million useful facts.

The Weekly Bee Journal, for one year,
and the Guide, postpaid, for \$1.30.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

Bee-Hives, Honey-Boxes, Sections.

Largest Bee-Hive Factory in the World.

Capacity, one car-load per day. Best of goods at
lowest prices. Write for price-list.

C. B. LEWIS & CO.
514tf. WATERTOWN, WIS.

THE HORSE,

By B. J. KENDALL, M. D.

A TREATISE giving an index of diseases,
and the symptoms; cause and treatment of each,
a table giving all the principal drugs used for the
horse, with the ordinary dose, effects and antidote
when a poison; a table with an engraving of the
horse's teeth at different ages, with rules for telling
the age of the horse; a valuable collection of re-
cipes, and much valuable information.

Price 35 cents,—in English or German.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

1869. UP WITH THE TIMES. 1886

Armstrong's

Perfection

CROWN HIVE

The brood-frames, honey-rack, and section-boxes
are all Reversible.

At the St. Joseph and St. Louis, Mo., Expositions
in 1885, it took the first premium over several of
the most prominent beehives now in use.

Illustrated Catalogue sent free. Address,
5D13t E. ARMSTRONG, Jerseyville, Ill.

DUNHAM

FOUNDATION.

WE have a large stock of choice yellow bees-
wax, and can furnish Dunham comb founda-
tion for brood-comb, cut to any size for 40c. per lb.
Extra thin Vandervort foundation, 46c. per lb. We
guarantee our foundation to be made from pure
beeswax, and not to sag. Will work up wax for 10c
per lb., and 20 cts. per lb. for sections.

F. W. HOLMES,

9D1tf COOPERSVILLE, Ottawa Co., MICH.

BEAUTIFUL

FOUNDATION and very choice all-in-one-
piece SECTIONS, V-groove—Wholesale and
Retail, and exceedingly cheap. Send for samples
and Free Price-List of everything needed in the
apary.

M. H. HUNT, Bell Branch,

18D1tf (Near Detroit), Wayne Co., MICH.

SOUTHERN HEAD-QUARTERS

FOR Early Italian Queens, Nuclei and
Full Colonies; the manufacture of Hives,
Sections, Frames, Feeders, Foundation,
etc., a specialty. Superior work and best material
at "let-live" prices. Steam Factory fully equipped
with the latest and most approved machinery
Send for Illustrated Catalogue. Address,

J. P. H. BROWN,

7D10t AUGUSTA, GEORGIA.

BEES, QUEENS,

AND

APIARIAN SUPPLIES.

First-Class Goods at Low Prices.

A FINE LOT OF ITALIAN BEES

For Sale Cheap.

Send Postal Card for Illustrated Circular

and Price-List.

J. C. SAYLES,

13D1tf HARTFORD, WIS.

White Poplar Sections

We make the finest Honey-Sections in the World

and make no exceptions. G. M. Doolittle says:

"The last sections are just complete." James

Heddon—"They excel everything in the line of

perfect workmanship." Prof. N. W. McLain—"The

sections excel anything I have seen heretofore."

J. B. Mason—"Have received samples from all

manufacturers who advertise in the bee-papers. I

must say this is by far the nicest section I have

ever seen." Jno. L. Janeway—"They seem perfec-

tion itself so far as human workmanship can go."

Sample for 3-cent stamp. Price-List of Sections,

Hives, Syrio-Albino Queens and Bees, and other

Apiarian Supplies, free.

Address, DR. G. L. TINKER,

3D1tf NEW PHILADELPHIA, OHIO

DR. FOOTE'S HAND-BOOK OF HEALTH,

HINTS AND READY RECIPES,

is the title of a very valuable book that gives a
great amount of information, of the Utmost im-
portance to Everybody, concerning their daily
habits of Eating, Drinking, Dressing, Sleeping,
Bathing, Working, etc.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sight-
edness,

Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercises,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malarial Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Bolls, Burns, Chills, Cold Feet,
Corns, Coughs, Cholera, Diarrhoea, Diphtheria, Dys-
entery, Dandruff, Dyspepsia, Ear Ache, Felons,
Fetid Feet, Freckles, Headache, Hiccough, Hives,
Hoarseness, Itching, Inflamed Breasts, Ivy Poison-
ing, Mole, Pimples, Piles, Rheumatism, Ringworm,
Scoring, Stammering, Sore Eyes, Sore Mouth, Sore
Nipples, Sore Throat, Sun-stroke, Stings and Insect
Bites, Sweating Feet, Toothache, Ulcers, Warts,
Whooping Cough, Worms in Children.

Price only 25 Cents. Sent by Mail, post-paid.

THOS. G. NEWMAN & SON,

923 & 925 West Madison St., CHICAGO, ILL.

Wooden Pails for Honey!

WE can furnish regular Wooden Water-Pails—
well painted on the outside, and with 3 iron
hoops and a tight-fitting wood cover, at \$2.25
per dozen. They will hold 25 lbs. of honey, and
when empty, can be utilized for use as an ordinary
household pail.

THOS. G. NEWMAN & SON,

923 & 925 West Madison Street, CHICAGO ILL.

WE Make a Specialty of HONEY-
LABELS, Section Cartons, Extracted
Honey Packages, etc. Our large, 20-page
Catalogue is free.

A. O. CRAWFORD, S. Weymouth, Mass.

19D8t

NOW READY TO SHIP—Untested

Italian Queens at \$1.00 each. Send

for Catalogue. MARTIN & MACY,

20E4t N. MANCHESTER, IND.

BAKER & CO.
DESIGNERS AND
ENGRAVERS OF WOOD
CORNER OF
CLARK & MONROE STS.
CHICAGO.
FOOT LOCK.
ENGRAVERS TOOLS & SUPPLIES.

NEW ONE-POUND HONEY PAIL.

THIS new size of our Tapering
Honey Pails is of uniform design
with the other sizes, having the top
edge turned over, and has a ball or
handle,—making it very convenient
to carry. It is well-made and, when
filled with honey, makes a novel and
attractive small package, that can
be sold for 20 cents or less. Many
consumers will buy it in order to give the children
a handsome toy pail. PRICE, 75 cents per
dozen, or \$5.00 per 100.

THOS. G. NEWMAN & SON,
923 & 925 West Madison Street, CHICAGO, ILL.

THE BRITISH BEE JOURNAL AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published every
Week, at Ten Shillings and 10d. per annum, and
contains the best practical information for the
time being, showing what to do, and when and
how to do it. It is edited by T. W. Cowan, Esq.

The British Bee Journal and the AMERICAN
BEE JOURNAL, one year, for \$3.50.

ALLEY'S QUEENS.

READY JUNE 1, 1886.

WARRANTED Queens, by mail \$1 00
 SELECT " " per 1/4 doz. 5 00
 " " each 1 25
 TESTED " " per 1/4 doz. 7 00
 " " each 1 50
 By adding 50 cents to any of the above prices (except for warranted Queens), we will send the Handy Book, or a Drone and Queen Trap, by mail.
HENRY ALLEY, WENHAM, MASS.
 20Atf

ROOT'S SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, shipped from here at his prices.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Also Bee-Books, Italian Queens, Nuclei and Colonies. Price List Free.

9Wly **J. M. JENKINS, Wetumpka, Ala.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

**DOWN, DOWN, DOWN!
We Come!**

ON ALL kinds of APIARIAN FIXTURES, we quote lower prices in our 1886 Circular than we ever have before, on all kinds of practical hives now in use, on Metal Corners and all-wood frames and the V-groove Section, Smokers and Extractors. In fact everything pertaining to Bee-Culture. Be sure and send for our Circular before purchasing your Supplies for the season.

BRIGHT BROS.,

14Wtf **MAZEPPA, MINN.**

A YEAR AMONG THE BEES,

BEING

A Talk about some of the Implements, Plans and Practices of a Bee-keeper of 25 years' Experience, who has for 8 years made the Production of Honey his Exclusive Business.

BY DR. C. C. MILLER.

Price, 75 cents, by mail. This is a new work of about 114 pages, well-printed and nicely bound in cloth. Address,

THOS. G. NEWMAN & SON,
 923 & 925 West Madison St., CHICAGO, ILL.

BEE-KEEPERS' GUIDE;

OR, MANUAL OF THE APIARY.

13,000 SOLD SINCE 1876.

14th Thousand Just Out!

10th Thousand Sold in Just Four Months!

5,000 Sold Since May, 1885.

More than 50 pages, and more than 50 fine illustrations were added in the 8th edition. The whole work has been thoroughly revised, and contains the very latest in respect to bee-keeping. It is certainly the fullest and most scientific work treating of bees in the World. Price, by mail, \$1.25. Liberal discount to dealers and to clubs.

A. J. COOK, Author and Publisher,
 1Aly Agricultural College, Mich.

QUEENS BY RETURN MAIL.

I AM up with my orders and can send 1 QUEENS by return mail. Capacity, 75 to 100 a week. Six Warranted Queens for \$5.00. I have the finest breeders I ever had. Also English Rabbits \$1 a pair.

22Atf **J. T. WILSON, Nicholasville, Ky.**

TESTED Queens, (Imported Mother), \$1.25 each; \$12 per doz.—O. N. Baldwin, Clarksville, Mo.
 4Ayl

PURE Italian Bees, of the best strain. In Langstroth or Gallup hives. Send for Circular.
 11Atf **O. CLUTE, Iowa City, Iowa.**

**Lewis' V-Groove One-Piece
SECTIONS.**

Down, Down, Goes the Price!

First Quality White Basswood One-Pound SECTIONS—in lots of 500 to 3,000—\$4.00 per 1,000.

Special Freight Rates

If 3,000 or more are wanted, write for special prices delivered to you, freight paid by us.

G. B. LEWIS & CO.,

WATERTOWN, WIS.

April 15, 1886.

16Wtf

40 CENTS per pound, boxed. None
 VonDorn's Dunham Brood Foundation. Circular Free. Better
T. L. VON DORN, Omaha, Neb.
 12A16t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.
 Atf **J. VANDERVORT, Laceyville, Pa.**

Bee-Keepers' Supplies,

OF ALL KINDS.

Sections & Comb Foundation
 A SPECIALTY.

125 colonies of Bees for sale

in Quinby frames, mostly Italians.



These Bees will be SOLD CHEAP. Send for prices. Also, for Illustrated Price-List.

W. E. CLARK, successor to L. C. Root,
 11A13t **ORISKANY, Oneida County, N. Y.**

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

BEESWAX.

We pay 20c. per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON,
 923 & 925 West Madison Street, CHICAGO, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DO YOU EAT CANDY?

SEND \$1.25 and I will express 5 lb. Todd's Honey Candles, same as made a sensation at last Pennsylvania State Fair. Remember, every pound sold helps the honey trade. Special rates for quantities for Fairs. Dadant Foundation always in stock at market prices. Bees, Queens, Hives, Smokers. Vol. I of Frank Cheshire's New Book mailed free for \$2.50.
ARTHUR TODD,
 1910 Germantown Ave., PHILADELPHIA, PA.
 17A10t

**TWO-POUND
SECTIONS.**

Job Lot—Cheap!

WE have on hand a Job Lot of 20,000 One-Piece Sections with square groove, which we will close out at \$3.50 per 1,000, or \$2.00 for 500. The size is: top and bottom, 6 inches; sides, 5 1/4 inch; width of section, 1 1/4 inches—narrow tops.

THOS. G. NEWMAN & SON,
 923 & 925 West Madison St., CHICAGO, ILL.

ITALIAN QUEENS BY RETURN MAIL.

TESTED, \$1.00; Untested, 75 cts.
 22A3t **GEO. STUCKMAN, Nappanee, Ind.**

BY RETURN MAIL

Select Tested QUEENS, \$1.50 each.
 Warranted Queens, 75c. Per doz., \$8.00.
 Strong three-frame Nuclei, with tested Queen, \$2.50 each.

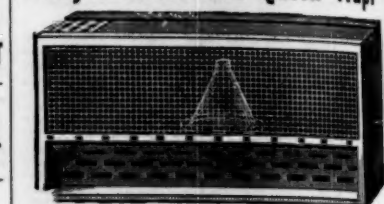
All Queens strictly pure Italians.

Address, **JAN. F. WOOD,**
 20A20t **NORTH PRESCOTT, MASS.**

One-Piece Sections,

MADE with a A-groove, warranted perfect, 4 1/4 x 4 1/4 and 1 1/4 wide—\$4 per 1,000. Five per cent. discount on orders of 5,000 and over at one time.

J. P. MCGREGOR,
 22A3t **FREELAND, Saginaw Co., MICH.**

Alley's Drone and Queen Trap.

Price, by Express, 50 cts.; by mail, 65 cts.; 12 in the flat, and one nailed (18 in all), \$3.50; 50, in the flat, \$12.00. Address,

THOS. G. NEWMAN & SON,
 923 & 925 West Madison St., CHICAGO, ILL.

MANUFACTORY

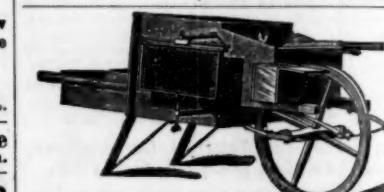
FOR HIVES, SECTIONS, &c.

I AM now prepared to supply dealers and others with

Hives, Sections, Shipping-Crates, Supers, etc.,

of all kinds. I make a specialty of LANGSTROTH AND MODEST HIVES. Correspondence with supply dealers solicited. My Sections are all made from Poplar. Address,

GEORGE TAYLOR,
 11Atf **DUNDEE, Kane Co., ILLS.**

**DAVIS' PATENT HONEY CARRIAGE**

REVOLVING COMB-HANGER,

Tool Box and Recording Desk Combined.

Price, complete, only \$18.00.

THOS. G. NEWMAN & SON,

923 & 925 West Madison Street, CHICAGO, ILL.

200 Colonies Italian & Hybrid Bees

FOR SALE,

IN 9 and 10 frame hives, all strong and healthy, wintered in the cellar. Will deliver them aboard of cars—for Italians, \$5.50; Hybrids at \$7.50. Will guarantee as represented, or money refunded.

Italian Queens—Untested, \$1.00; Tested, \$2.50.

Send money by P. O. Order or Registered Letter.

16W8t **L. J. DIEHL, BUTLER, IND.**

GIVEN AWAY!

SEWING MACHINES.

100,000

Newest and Best.

Black Walnut,

Drop Leaf Table

Cover 3 Drawers

and Full Set of Attachments, only \$14.50.

Cash or FREE for

29 Subscribers to THE WESTERN WORLD.

FREE HOMES

IN THE

United States.

How to Get Them.

Where to Invest

Money or find Employment told in the most widely-circulated paper published.

Price \$1.00. Sent to CHICAGO, Ill.

For Sample Copy